



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region X**

**Subject:** **POLREP #3**  
**Initial steps removing CERCLA hazardous substances and tall oil**  
**Treoil Industries Biorefinery**

**Ferndale, WA**  
**Latitude: 48.8789186 Longitude: -122.7107528**

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Jesse Stark, NOAA

**From:** Brooks Stanfield, On Scene Coordinator

**Date:** 3/27/2017

**Reporting Period:** End Week 2

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	10PZ	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	OPA	<b>Response Type:</b>	Emergency
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>	Non NPL	<b>Operable Unit:</b>	
<b>Mobilization Date:</b>	3/13/2017	<b>Start Date:</b>	3/13/2017
<b>Demob Date:</b>		<b>Completion Date:</b>	
<b>CERCLIS ID:</b>	WAN 001002088	<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>	E17004	<b>Reimbursable Account #:</b>	Z0ES

#### 1.1.1 Incident Category

Emergency response. CERCLA and OPA concerns.

#### 1.1.2 Site Description

Treoil Industries is an approximately 34-acre industrial property. The site is currently reported as not in operation however historically has been used for tall oil processing, as a biodiesel refinery, metal fabrications, and other small scale miscellaneous industrial operations.

##### 1.1.2.1 Location

4242 Aldergrove Road - Ferndale (Whatcom County), Washington

The site is approximately 1.8 miles from the shoreline of the Strait of Georgia, a navigable water of the United States.

##### 1.1.2.2 Description of Threat

3/6/17

EPA received initial reports from a site visit conducted by Washington Department of Ecology and Whatcom County Health Department, which outlined a deterioration of safety and environmental conditions on the property including but not limited to: hazardous substances that had released from containers or threatened to release, improper storage and labeling of chemical containers, oil being stored within failing secondary containment or no containment at all, and a complete lack of site security.

##### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Following two weeks of site investigation activities EPA confirmed:

- Approximately 50 visible Aboveground Storage Tanks (ASTs). Thirty-nine tanks with a holding capacity of over 550,000 gallons were outside secondary containment, while 11 tanks with a holding capacity of 460,000 gallons were found located inside secondary containment. Although it was estimated that 165,000 gallons of tall oil has solidified in ASTs and does not pose an immediate threat to waterways, approximately 10,000 gallons of oily water and 30,000 of liquid phase tall oil do pose a threat, especially as that vast majority is in ASTs situated outside secondary containment.
- Numerous totes located inside and outside buildings with no secondary containment holding approximately 3,000 gallons of abandoned tall oil and dozens of cubic yards of tall oil sludge;
- An estimated 10,000 gallons of glycerin crude from biodiesel production;
- Nearly 600 containers of hazardous chemicals in leaking, mislabeled, or otherwise inappropriately stored containers that fall under six of nine DOT hazard classes, the vast majority of which posed an extreme fire hazard;

- Asbestos containing material in deteriorated condition discarded onto soil, warehouse floors, left in five 1-cubic-yard sacks and other open containers.
- An open drum full of what appeared to be abandoned buckshot. Field screening indicated the material was 20% (200,000 parts per million) lead. Three additional drums were discovered with a sandy pebbly material that yielded XRF field readings of lead and/or arsenic exceeding 10,000 ppm.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

Refer to PolRep #1.

#### 2.1.2 Response Actions to Date

Refer to PolReps #1 and #2 for activities prior to 3/20/17

##### CERCLA Chemicals

All materials were removed from the shipping container located along the western fence line and staged for future removal. Among the hazardous contents found in this structure were three drums of Ortho-lam resin which were classified as a flammable solid. These drums were segregated and will be overpacked for removal from the site, also anticipated during the week of 3/27.

Consolidation and solidification of CERCLA chemicals continued throughout the week. It is believed that this task is nearly complete. The overpacking of CERCLA hazardous chemicals requiring additional measures, shipment, and off-site disposal began on Friday 3/24 and is expected to be completed within 2-3 work days.

Atul Deshmene of Whole Energy completed collection of eight 275-gallon totes of glycerin crude and methanol for off-site recycling.

Suspected ACM continued to be found throughout the week, including material found in three drums.

Samples were taken and sent for laboratory analysis while the suspected material was consolidated and designated for possible removal with confirmed ACM. Disposal is anticipated during the week of 3/27.

On 3/25 START inventoried a pallet of bagged materials. Three of these bags contained material that did not reflect the labeling on the bag. These bags were marked and will be disposed off-site since their contents did not match their labeling. All three exhibited DOT 9 characteristics based on FirstStep sampling.

##### Tall Oil in Totes and ASTs

Consolidation and solidification of tall oil liquids and sludge in drums and totes continued throughout the week and the shipment of several dozen cubic yards of solidified tall oil sludge began. On 3/25 4 drums and 3 totes partially submerged in the larger secondary containment were removed. These totes were discovered to contain predominantly tall oil sludge. This material was solidified and prepared for disposal with the other like material.

EPA ERRS contractors completed their inventory of all 50 ASTs on the property. Refer to section 1.1.3 of this report for a summary of contents inventoried during this study. In addition to identifying AST contents, this study assisted the team in beginning to develop removal strategies for the estimated 30,000 gallons of liquid tall oil and 10,000 gallons of oily water.

EPA START contractors sampled water from secondary containment and oily water in Tanks 1 and 18 anticipating that this water may need to be disposed of. Sampling of liquid tall oil product from several ASTs was also completed in order to determine disposal/recycling options for this material.

Openings in the tanks were being sealed with materials located on the site to avoid further accumulation of oily rainwater inside ASTs.

##### Contaminated Soils and Sediment

Sediment samples were collected from the trenches located in the two warehouse buildings. All samples were shipped for off-site fixed laboratory analysis.

On 3/20 representatives from the Lummi Nation visited the site, conducted a tour, expressed their concerns over water quality issues and recommended that EPA consult the Lummi Nation Tribal Historic Preservation Officer before engaging in any soil disturbing activities because of the likelihood of encountering cultural artifacts.

Assessment of site features for mapping purposes was completed by EPA START contractors.

#### 2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

Refer to PolRep #1.

#### 2.1.4 Progress Metrics

ASTs inventoried: 50 (100%)

Buildings cleared of oil and CERCLA chemicals: 3 (100%)

Containers inventoried 589 (99%)

FirstStep samples collected 300 (99%)

FirstStep Analyses 323 (99%)

<b>Waste Stream</b>	<b>Medium</b>	<b>Quantity</b>	<b>Manifest #</b>	<b>Recycling</b>	<b>Disposal</b>
Glycerin crude	Liquid (gal)	10,500		X	
Tall oil	Liquid (gal)	30,000		?	
Tall oil sludge	Solid (cy)	54			X

ACM	Solid (cy)	8			X
Oily water	Liquid (gal)	10,000			X
CERCLA Chemicals	Containers	589			X

## 2.2 Planning Section

### 2.2.1 Anticipated Activities

#### 2.2.1.1 Planned Response Activities

In the forthcoming week EPA crews anticipate completion of the following key tasks:

##### Monday:

Completion of overpacking of CERCLA hazardous chemicals.

Pump water from Tank 18 to Tank 1 and begin cutting the tank in order to access the drums abandoned inside.

##### Tuesday:

Four 20 cubic-yard Rolloff boxes of CERCLA and/or OPA waste will be shipped offsite.

Two new Rolloff boxes will be dropped off.

##### Wednesday:

Removal of several thousand gallons of consolidated liquids from drums and totes abandoned in warehouses (mostly tall oil) using a Vac truck.

##### Thursday:

Begin the removal of oily water and tall oil from abandoned ASTs outside secondary containment.

##### Friday:

Continue the removal of oily water and tall oil from abandoned ASTs outside secondary containment.

##### TBD:

Removal and disposal of ACM.

Construction of temporary containment of tall oil in ASTs to be accessed and pumped during summer months.

#### 2.2.1.2 Next Steps

Continued coordination with State and PRP on conducting on-site response activities and working to safely recycle hazardous materials recovered from abandoned tanks on site.

Receipt and compilation of analytical data to support the disposal and/or recycling of tall oil, water found in the ASTs and secondary containment, and sediments in the trenches inside the warehouses.

Coordination with Ecology on sampling plans for stained sediment and soil.

### 2.2.2 Issues

Site personnel have worked six consecutive 12-hour days and will be taking Sunday off for health and safety. A private security officer will be on site during this time.

Wet winter conditions have made safely accessing several ASTs located in wetland areas challenging and unsafe with heavy equipment. EPA and its contractors are exploring alternate strategies for recovering liquid phase tall oil from these tanks, which may involve the creation of temporary containment until drier conditions will allow heavy equipment to access and pump oil from the tanks.

EPA had explored strategies for some minimal scraping of surface soil stained with tall oil that has leaked from ASTs. Information provided by the State and tribal historic preservation officials suggests that an archeological survey will be needed before even minimal soil disturbance activities occur. As a result, EPA will be engaging the State and County Health Department in planning future soil investigations to allow adequate time for archeological surveys and consultation.

## 2.3 Logistics Section

No information available at this time.

## 2.4 Finance Section

### 2.4.1 Narrative

As of 3/27/17:

CERCLA cost ceiling is \$255,300.

OPA cost ceiling is \$900,000

These are subject to change as more of the unknown conditions are assessed to a greater degree.

## 2.5 Other Command Staff

### 2.5.1 Safety Officer

Valeriy Bizyayev - START

### 2.5.2 Liaison Officer

TBD

### 2.5.3 Information Officer

Bill Dunbar - EPA

## 3. Participating Entities

### 3.1 Unified Command

### 3.2 Cooperating Agencies

Washington Department of Ecology  
Washington Department of Archeology and Historic Preservation  
Whatcom County Health Department  
US Department of Interior  
National Oceanic and Atmospheric Administration  
US Coast Guard - National Pollution Funds Center

### 3.3. Cooperating tribes

Lummi Nation

## 4. Personnel On Site

Since PolRep # 2

#### EPA OSCs

3/20/17 - 2  
3/21/17 - 2  
3/22/17 - 1  
3/23/17 - 3  
3/24/17 - 1  
3/25/17 - 1

#### EPA ERRS Contractors

3/20/17 - 8  
3/21/17 - 8  
3/22/17 - 8  
3/23/17 - 7  
3/24/17 - 8  
3/25/17 - 8

#### EPA START Contractors

3/20/17 - 3  
3/21/17 - 3  
3/22/17 - 3  
3/23/17 - 3  
3/24/17 - 2  
3/25/17 - 2

Property Owner Representative, Atul Deshmane - Whole Energy

Washington Department of Ecology Hazardous Waste Program - 1

Whatcome County Health Department - 1

## 5. Definition of Terms

ACM - Asbestos Containing Material

AST - Aboveground Storage Tank

CERCLA - Comprehensive Environmental Response Compensation and Liability Act

DOT - US Department of Transportation

Ecology - Washington Department of Ecology

FirstStep- FirstStep method of hazard class categorization of unknown chemicals for purposes of identification, storage, transportation, and disposal.

OPA - Oil Pollution Act

PPE - Personal Protective Equipment

PPM - Parts Per Million

Tall oil - also called "liquid rosin" or tallol, is a viscous yellow-black odorous liquid obtained as a by-product of the Kraft process of wood pulp manufacture when pulping mainly coniferous trees. It is treated as an oil under the federal Oil Pollution Act.

## 6. Additional sources of information

### 6.1 Internet location of additional information/report

EPA Emergency Response incident webpage for Treoil:  
[response.epa.gov/treoil](https://response.epa.gov/treoil)

Washington Department of Ecology Toxic Cleanup Program webpage for Treoil:  
<https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=950>

### 6.2 Reporting Schedule

The next PolRep is anticipated by Wednesday 3/22/17.

## 7. Situational Reference Materials

Maps and site diagrams forthcoming in future reports.